

NONPROVISIONAL APPLICATION FOR LETTERS PATENT
UNITED STATES OF AMERICA

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Be it known that I, STACIE LINSKY, residing at 1252
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10 BANKS, residing at 560 Park Avenue, Atlanta, Georgia 30312,
citizens of the United States, have invented certain new
and useful improvements in an

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APPARATUS AND METHOD FOR FACILITATING
BREAST SELF-EXAMINATIONS

20 of which the following is a specification.

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APPARATUS AND METHOD FOR FACILITATING BREAST SELF-EXAMINATIONS

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TECHNICAL FIELD

The present invention relates generally to medical examination devices and methods, and more specifically to an apparatus and method for facilitating breast self-examinations and the recordation of evaluative results therefrom.

BACKGROUND OF THE INVENTION

15 Recent clinical research studies have established that approximately one in eight women in the United States will develop breast cancer in her lifetime. However, through guidance from breast cancer awareness programs, medical practitioners and associated routine professional
20 examinations, women are encouraged to take a proactive role in reducing the likelihood of developing breast cancer via performing monthly breast self-examinations. Such breast self-examinations typically involve active observation of the superficial breast tissue to visually identify any
25 abnormal changes thereto, and further involve the feeling

or palpating of the breast tissue to actively recognize any lump, nodule or tumor that might be an early sign of breast cancer.

5 Although it is recommended that breast self-examinations not replace regular clinical breast exams by a health professional, it is generally recognized that routine breast self-examinations serve as an indispensable primary preventative health measure in a woman's general
10 health maintenance. Additionally, breast self-examinations enable a woman to create an intimate knowledge of her breasts to facilitate expeditious recognition of any changes and/or abnormalities that may signify breast cancer and/or other breast conditions requiring professional
15 medical evaluation.

To conduct the palpating portion of the breast self-examination, it is generally recommended that women utilize alternating levels of pressure, ranging from superficial to
20 deep pressure, when palpating the breast to detect the presence of lumps or other abnormalities. To facilitate palpating of the breast, and to effectively examine all relevant breast tissue and chest area, including the

armpit, across the collarbone and down the front of the sternum, three established examination patterns are available, loosely termed the vertical or stripes pattern, spiral or circular pattern, and wedge pattern.

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Although women are encouraged to familiarize themselves with such breast self-examination patterns for proper and thorough examination of their breast tissue, many women are, unfortunately, either completely unapprised
10 of, or only moderately familiar with such patterns, and as such, are likely to improperly conduct their breast self-examination. Additionally, even women familiar with the breast self-examination patterns often neglect to examine all areas considered to be breast tissue, such as the
15 armpit.

Moreover, palpating the breast tissue requires that the woman maintain her fingers against the breast tissue at all times during the examination, gliding her fingers
20 thereover to ensure thorough examination of all relevant areas. However, human skin is inherently frictional due to sweat gland secretions, hair, and the like. As such to facilitate the frictionless palpating movement and

examination of the breast tissue, women are usually required to apply a lubricant or powder to the examination area to reduce overall friction thereacross. Although necessary for proper examination, application of such
5 friction-eliminating substrates can be messy, therefore entailing subsequent clean-up and inconvenience, and protracting the overall examination process.

Of additional concern, and seemingly absent from
10 available breast self-examination processes, is a method of effectively recording the location of lumps or other abnormalities discovered during the examination for future identification, relocation, and/or comparison with new examination results or findings. As such, it often becomes
15 difficult for many women to remember and locate sites of abnormalities from one examination period to another, and therefore either establishes a potential false sense of complacency upon the non-discovery of the lump in the area of the breast thought to contain same, or a sense of
20 trepidation in seemingly inconsistent examination results.

Therefore, it is readily apparent that there is a need for an apparatus and method that avoids the above-discussed

disadvantages of current bare breast self-examination processes, yet facilitates the palpating portion of the examination and the contemporaneous recordation and future retrieval of evaluative results therefrom.

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BRIEF SUMMARY OF THE INVENTION

Briefly described, in a preferred embodiment, the present invention overcomes the above-mentioned
10 disadvantages and meets the recognized need for such a device by providing an apparatus and method for facilitating breast self-examinations and the recordation of evaluative results therefrom, wherein a thin-materialled, tightly-fitting, shirt-like garment having a low-
15 coefficient of friction and comprising breast self-examination patterns thereon is utilized to guide a user's fingers during examination of her breasts, and wherein a marking instrument is utilized to mark or ink areas of suspected abnormalities directly on the garment, thereby
20 facilitating future identification and/or comparison with new examination results or findings. The present apparatus and method enables a user to conduct a breast self-examination by palpating her breasts from the outside of

the garment, as opposed to directly feeling or contacting her bare breasts.

According to its major aspects and broadly stated, the
5 present invention in its preferred form is an apparatus and method for facilitating breast self-examinations and the recordation of evaluative results therefrom, having, in general, a shirt-like garment, breast self-examination patterns, and a marking pen or instrument.

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More specifically, the present invention is an apparatus and method for facilitating breast self-examinations and the recordation of evaluative results therefrom, having a shirt-like garment preferably
15 fabricated from a low-friction and thin Spandex material, LYRCA material, nylon material, cottons, polyesters, latex, composites thereof, and/or other suitably thin materials. The garment is preferably manufactured in a variety of tight or form-fitting sizes to exert a sufficiently minimal
20 pressure against the wearer's breasts for maintaining the breasts in a relatively stationary and flattened position to facilitate thorough examination of all the breast tissue.

Each shirt preferably possesses any one established and conventional breast examination pattern printed thereon (i.e., vertical or stripes pattern, spiral or circular pattern, and wedge pattern), preferably over each breast.

5 Preferably, two alignment marks centered within each of the patterns are utilized to align the wearer's nipples underneath the shirt relative to the overlying examination patterns, thereby ensuring proper examination of the breast tissue. Additionally, each shirt preferably possesses an
10 examination pattern positioned underneath the armpit areas thereof, thus permitting guided examination of same. Due to the relatively thin nature and low-coefficient of friction of the material utilized to fabricate the shirt, the user is able to conduct the breast exam by palpating
15 her breasts from the outside of the shirt; that is, without having to insert her hands through, under, or within the shirt to feel and examine her bare breasts.

The shirt material is further preferably adapted to
20 receive and maintain ink markings applied directly thereon via a non-permanent and/or permanent ink-marking pen. Contemporaneous use of the marking pen during examination of the breasts enables the wearer to designate or mark

areas of potential abnormalities and/or lump, nodule, or tumor developments, thereby facilitating identification, relocation, and/or comparison of same with new examination results or findings at a later date (i.e., before a medical practitioner). It is preferred that a non-permanent marking pen be utilized to enable the washing and reuse of the garment, thereby avoiding potential confusion of older markings with new findings and associated markings.

10 Accordingly, a feature and advantage of the present invention is its ability to facilitate breast self-examinations of all relevant breast tissue and chest area, including the armpit, across the collarbone and down the front of the sternum.

15 A feature and advantage of the present invention is its ability to form-fit the wearer to maintain the breasts in a substantially stationary and suitably flattened position to facilitate examination of same.

20 A feature and advantage of the present invention is its ability to permit the recordation of abnormal findings

via directly marking such areas on the garment via a marking pen or other instrument.

5 A feature and advantage of the present invention is its ability to permit the reduced or low friction guidance of the wearer's fingers across the patterns printed thereon, thus eliminating the need for external lubricant or powders as commonly utilized in conventional breast examination processes.

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A feature and advantage of the present invention is the fabrication of the garment from any suitable thin material that permits effective examination of the breasts from the outside of the garment, as opposed to feeling and
15 examining the bare breasts, and/or insertion of the wearer's hands through or within the garment for examination of her bare breasts thereunder.

These and other objects, features and advantages of
20 the present invention will become more apparent to one skilled in the art from the following description and claims when read in light of the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

The present invention will be better understood by reading the Detailed Description of the Preferred and
5 Alternate Embodiments with reference to the accompanying drawing figures, in which like reference numerals denote similar structure and refer to like elements throughout, and in which:

10 **FIG. 1** is a front view of an apparatus for facilitating breast self-examinations according to a preferred embodiment of the present invention;

FIG. 2 is a front view of an apparatus for
15 facilitating breast self-examinations according to an alternate embodiment of the present invention;

FIG. 3 is a front view of an apparatus for
facilitating breast self-examinations according to an
20 alternate embodiment of the present invention;

FIG. 4 is a front view of an apparatus for facilitating breast self-examinations according to an alternate embodiment of the present invention;

5 FIG. 5 is a perspective view of an apparatus for facilitating breast self-examinations according to a preferred embodiment of the present invention, shown in use.

10 DETAILED DESCRIPTION OF THE PREFERRED
 AND ALTERNATIVE EMBODIMENTS

In describing the preferred and alternate embodiments of the present invention, as illustrated in FIGS. 1-5, specific terminology is employed for the sake of clarity. 15 The invention, however, is not intended to be limited to the specific terminology so selected, and it is to be understood that each specific element includes all technical equivalents that operate in a similar manner to 20 accomplish similar functions.

Referring now to FIGS. 1-4, the present invention in a preferred embodiment is an apparatus 10, wherein

apparatus 10 facilitates breast self-examinations and the recordation of evaluative results therefrom, and wherein apparatus 10 preferably generally includes garment 20 and marking instrument 40.

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Referring now more specifically to **FIG. 1**, garment 20 is preferably shirt-like and preferably fabricated from a low-friction, stretchable, and thin material, such as, for exemplary purposes only, Spandex, LYRCA, nylon, cotton
10 blends, polyester blends, rayon blends, latex, composites thereof, and/or other suitably thin materials, including but not limited to, textile fabrics, plastics, or combinations thereof. To accommodate women of differing body and breast or cup size, garment 20 is preferably
15 manufactured in a variety of tight or form-fitting sizes. Preferably, the form-fitting, yet stretchable nature of the fabric of garment 20, functions to exert a sufficiently minimal pressure against the wearer's breasts for maintaining the breasts in a relatively stationary and
20 flattened position to facilitate thorough examination of the breast tissue, as more fully described below.

As illustrated in FIG. 1, garment 20 preferably possesses vertical patterns 22 and 24 printed thereon, wherein patterns 22 and 24 preferably represent an established and conventional breast examination pattern, and wherein patterns 22 and 24 are preferably disposed on garment 20 in such a manner so as to overly the wearer's breasts when garment 20 is in use, as more fully described below.

Preferably, alignment marks 26 and 28 are centrally disposed within patterns 22 and 24, respectively, and are preferably utilized to align the wearer's nipples underneath garment 20 relative to the overlying examination patterns 22 and 24, respectively; thus, ensuring proper alignment of patterns 22 and 24 over the wearer's breasts and, in turn, proper examination of all relevant breast tissue. It is contemplated in an alternate embodiment that alignment marks 26 and 28 could be replaced with apertures for the exit and accommodation of the wearer's nipples therethrough, and the subsequent proper alignment of patterns 22 and 24 over the respective breasts, wherein the apertures would further facilitate examination of the

user's nipples for color changes or discoloration, fluid discharge, lumps, or the like.

Preferably, spiral or circular-like examination
5 patterns 30 and 32 are disposed or printed on respective
armpit areas 34 and 36 of garment 20. Armpit patterns 30
and 32 preferably function to permit the guided examination
of breast tissue lying within the armpit region of the
wearer.

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Referring now more specifically to **FIG. 2**, illustrated
therein is an alternate embodiment of garment 20, wherein
the alternate embodiment of **FIG. 2** is substantially
equivalent in form and function to that of the preferred
15 embodiment detailed and illustrated in **FIG. 1** except as
hereinafter specifically referenced. Specifically, the
embodiment of **FIG. 2** replaces vertical examination patterns
22 and 24 with spiral or circular patterns 122 and 124,
wherein patterns 122 and 124 represent an established and
20 conventional breast examination pattern, and wherein
patterns 122 and 124 are also disposed on garment 20 in
such a manner so as to overly the wearer's breasts when
garment 20 is in use.

Referring now more specifically to **FIG. 3**, illustrated therein is an alternate embodiment of garment **20**, wherein the alternate embodiment of **FIG. 3** is substantially equivalent in form and function to that of the preferred embodiment detailed and illustrated in **FIG. 1** except as
5 hereinafter specifically referenced. Specifically, the embodiment of **FIG. 3** replaces vertical examination patterns **22** and **24** with wedge patterns **222** and **224**, wherein patterns **222** and **224** represent an established and conventional
10 breast examination pattern, and wherein patterns **222** and **224** are also disposed on garment **20** in such a manner so as to overly the wearer's breasts when garment **20** is in use.

Referring now more specifically to **FIG. 4**, illustrated
15 therein is an alternate embodiment of garment **20**, wherein the alternate embodiment of **FIG. 4** is substantially equivalent in form and function to that of the preferred embodiment detailed and illustrated in **FIG. 1** except as
hereinafter specifically referenced. Specifically, the
20 embodiment of **FIG. 4** incorporates printed quadrant lines **300** and **302**, and printed circumscribed area **304**, in conjunction with examination patterns **22** and **24**, wherein a circumscribed area **304** is concentrically disposed about

each alignment mark 26 and 28, and wherein each circumscribed area 304 is bisected by quadrant lines 300 and 302. As such, quadrant lines 300 and 302 divide underlying vertical examination patterns 22 and 24, and the surrounding area, into four equal quadrants, wherein circumscribed area 304 defines an additional segregated area. The equal quadrants defined by quadrant lines 300 and 302, and the area defined by circumscribed area 304, are numbered 1-5 to designate the approximate percentage of breast cancers found in each area, wherein such percentages are clinically established percentages. Therefore, the defined quadrant area designated with the number "1" would be considered an area of higher percentage of breast cancer occurrence, wherein the defined quadrant area designated with the number "5" would be considered an area of lower percentage of breast cancer occurrence, with the remaining areas "2-4" falling therebetween. Such a configuration encourages the wearer to examine breast tissue falling within quadrants of higher percentage of breast cancer occurrence with extreme care so as to maximize the breast self-examination process. It is further contemplated that the quadrants defined by quadrant lines 300 and 302, and the area defined by circumscribed area 304, could instead

be colored-coded to indicate approximate percentage of breast cancer occurrence in each area.

Although examination patterns 22, 24, 122, 124, 222
5 and 224, quadrant lines 300 and 302, and circumscribed area
304, of the respective preferred and alternate embodiments,
are utilized to implement the present method of breast
self-examination, it should be recognized that other
examination patterns commensurate with established and/or
10 new medical practice could be utilized without departing
from the appreciative scope of the present apparatus and
method, as such alternate examination patterns are clearly
within the contemplation of the inventors in describing the
present invention herein. Additionally, it is further
15 contemplated that examination patterns 22, 24, 122, 124,
222 and 224, quadrant lines 300 and 302, and circumscribed
area 304, could be entirely or selectively combined with
one another to provide a customized breast self-examination
garment 20, wherein each selected pattern could be
20 differently colored, textured, lined, or otherwise, to
facilitate distinguishing one examination pattern from the
other.

Referring now to FIG. 5, in use, garment 20 is preferably worn by a user, wherein the user preferably aligns alignment marks 26 and 28 over her nipples prior to palpating or examining her breasts via patterns 22 and 24.

5 Preferably, due to the relatively thin nature and low-coefficient of friction of the material utilized to fabricate garment 20, the user is able to conduct the breast exam by palpating her breasts from the outside of garment 20; that is, without having to insert her hands

10 through or within garment 20 to feel and examine her bare breasts. Additionally, the low-friction surface of garment 20 facilitates gliding of the wearer's fingers over vertical patterns 22 and 24, and armpit patterns 30 and 36, thereby eliminating conventional methods of lubricating or

15 powdering the bare breasts for examination of same.

Should the wearer discover a lump, nodule, tumor and/or other abnormality during examination of her breast tissue via the preferred and/or alternate examination

20 patterns disposed on garment 20, the wearer preferably utilizes marking or writing instrument 40 to directly mark or designate on garment 20 the problematic areas. Marking instrument 40 is preferably any suitable ink or similar

substrate receivable by the material of garment 20 and, in combination with the material or fiber choice of garment 20, is resistant to bleeding or excessive outward movement or dispersion through the material's fibers when applied thereto, thereby ensuring that the ink delivered from marking instrument 40 is confined to the desired marked or designated area. Although it is preferred that marking instrument 40 deliver a non-permanent ink or similar substrate to enable the washing and reuse of garment 20, and thereby avoid potential confusion of older markings with new findings and associated markings, it is contemplated in an alternate embodiment that marking instrument 40 could deliver permanent ink to resist fading of same if garment 20 is subsequently washed. It is contemplated in a further alternate embodiment that hook-and-loop fasteners, stickers, or the like, could be utilized in place of marking instrument 40, wherein small patches of hook-and-loop fastener, or stickers, could be removably affixed to garment 20 to mark areas of potential concern.

The present method of marking abnormalities directly on garment 20 preferably facilitates accurate future

identification, relocation, and/or comparison of the markings with new examination results or findings, especially in view of the form-fitting nature of garment 20. As such, should a user desire to accurately demonstrate to a medical practitioner the location of a discovered lump or other abnormality, the user preferably wears garment 20 during the medical examination, making the appropriate adjustments of alignment marks 26 and 28 over her nipples, and points out the marked areas to the medical practitioner for his/her further evaluative attention.

It is contemplated in an alternate embodiment that a plurality of differently colored pens or marking instruments 40 could be utilized to designate or mark lumps or other abnormalities of varying firmness or the like, or to differentiate marks applied to garment 20 from one examination period to another.

It is contemplated in an alternate embodiment that the preferred and/or alternate forms of the present apparatus and method could be utilized by the wearer when standing or lying down.

It is contemplated in an alternate embodiment that the preferred and/or alternate forms of the present apparatus and method could be utilized by men to assist in the detection of male breast cancer.

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It is contemplated in an alternate embodiment that the preferred and/or alternate forms of the present apparatus and method could be modified to provide a garment capable of being utilized to conduct a breast self-examination in
10 the shower or bath tub, perhaps a garment in the form of a bathing suit.

It is contemplated in an alternate embodiment that the preferred and/or alternate forms of the present examination
15 patterns 22, 24, 34, 36, 122, 124, 222 and 224, respectively, of garment 20 could be textured to facilitate breast self-examinations by the visually impaired or blinded.

20 It is contemplated in an alternate embodiment that the preferred and/or alternate forms of the present apparatus and method could be modified to accommodate women who have

undergone a partial mastectomy, and therefore possess only one breast.

It is contemplated in an alternate embodiment that the preferred and/or alternate forms of the present apparatus and method could be modified to accommodate pregnant women, wherein the garment could possess a tight or form-fitting upper portion, and a skirted lower portion to cover the wearer's lower torso or belly region.

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Having thus described exemplary embodiments of the present invention, it should be noted by those skilled in the art that the within disclosures are exemplary only, and that various other alternatives, adaptations, and modifications may be made within the scope of the present invention. Accordingly, the present invention is not limited to the specific embodiments illustrated herein, but is limited only by the following claims.

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